

## LANGUAGE ACQUISITION IN AUTISTIC CHILDREN

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**Abstract:** *The term Autism has become popular in Indonesia since the end of 90's. The suspicious and peculiar cause of autism is still debatable until today. There are experts who suspect mercury substance of deep water fish to be the main cause of it and some others claim that it is caused by a particular vaccination before a child gets two years old. There are two common symptoms of a child labeled autistic; speech delay and mental retardation. This article describes the ways of an autistic child acquiring his first language in addition to the available theories of language acquisition for children and it also shares the writer's personal experiences living together with an autistic child of his own.*

**Keywords:** *Autism, speech delay, mental retardation, language acquisition, speech therapy*

I was quite excited and worried at the same time soon after I was told that my wife was rushed to the hospital nearby to have my first child's delivery. 'I am going to be a father, soon', I proudly said to myself. I was unable to hide my nerves as I managed to get near to a baby boy being dragged by a beautiful nurse on a cradle out of the operation theatre. The nurse holding the baby, to my surprise, called out my name and I hurriedly said 'yes, that's me, his father!' and then she gently handed over him onto my lap and urged me to whisper 'adzan' in his two tiny ears before dragging him back to the baby's room. This was really unforgettable to me as I made my first encounter with my own blood and flesh. Having had a closer look for a minute, I felt like being reborn and looking at my own look on a mirror. Oh God, he looks exactly like me! As days turned week and time keeps flying, he grew up normally like the other kids at his age except his first word that did not seem to come out ever since.

Greatly concerned with his education at his early age, I was thinking of sending him to a school. By the age of two, he started his hard days of his first school for children under three years old at Semarang 2000. In this regard, I was relying much on the school programs to help those children learn something new outside their homes. The program, indeed, helped all the children but nothing for my son. From a close observation, I managed to see that he could hardly follow every game he had to play and always nagged his mom to keep him company for not feeling secure with strangers in the room. He always failed to complete each game and much often stopped it half way because of his great loss of confidence. And it was crystal clear to me that my son was unable to socialize as well due to his speech failure in his conditioned-environment. Since his speech progress was totally different unlike the other kids in this school, my curiosity of his speech

failure made me think of seeing a pediatricist or anyone who could help me see him to lead his normal life.

As he turned two and a half, I took him to a spiritual healer in Wologito and he was labeled autistic since then. I was not reacting crazily for the diagnosis since autism was still far beyond my reach of knowledge that time. But I began to have a bad feeling about it as I realized that my wife was shocked after hearing over what the spiritual healer said about our son. We, indeed, used to be so happy and very proud of him until that heart-breaking news came to shatter our blissfulness into pieces. At first, we were absolutely powerless to think of helping him face his future because many people, as well as mass media, claim that there is no cure to get rid of autism today. As to getting myself informed more and more about autism, I was then determined to always walk by his side to face the days together. Thinking further ahead of time, I will never stop keeping him company until he manages to take good care of himself and I am still sure of where to find the best remedy for him.

Reaching his 4 years of age, he was still unable to say a word. However, I never gave up trying new efforts to make him talk from one place to another until a companion offered me some help for my kid. He then underwent several therapies from her and very soon he managed to utter words like 'pak' and 'bu'. It was like a miracle to us since speech therapy did not seem to work effectively for him. Another year passed by and he made such an amazing progress in acquiring more words. Though his words were not yet 'meaningful' and well-arranged but that matter was obviously an achievement to his parents. He could at least communicate what he felt and wanted more clearly than before. Based on his great progress in gaining new words day by day, we intentionally put him to a general school not to a school for children with special needs like he used to go. As he encountered more and more normal children at school, he seemed to have succeeded in controlling his tantrum as well as his strange behaviors. This is an illustration of an autistic child of the writer's showing only his speech difficulty as one of autistic symptoms.

The purpose of this article is to gain theoretical insight into language acquisition in humans by examining the characteristics of language in the autistic child. There have been many theories put forth to help us understand how language may be learned. Especially it is an interesting question raised by treatments designed by Lovass (1966) to teach language to autistic children. Lovass employed a behaviour therapy procedure utilizing reinforcement learning theory and shaping techniques to develop a "program for the establishment of speech in psychotic children" (Wing, 1966:115). The main questions arising from his program are: Were the children actually learning ie. acquiring language; that is, were they acquiring the facility to extract linguistic rules in order to produce sentences appropriate to situational changes? Or, were the children merely learning a highly complex "phrase book" in which they had compiled a repertoire of sentences for all occasions? Put simply, do these autistic children understand their newly learned speech in a way that is at all similar to the understanding of a normal child of equal linguistic development?

## **WHAT IS AUTISM?**

Autism is a complex syndrome involving genetics, the digestive and immune systems, viral, fungal and other pathogen invasions, and inability to detoxify poisons from heavy metals and pesticides (McCandless, 2005: 186). Autism is also claimed to cause a developmental delay that includes symptoms such as speech difficulties, lack of eye contact, isolation and no fear of danger. As this paradigm shift continues – and as an increasing number of children outgrow their autism – parents, physicians, and researchers are developing a greater awareness of environmental factors that appear to be etiologically significant in many and perhaps most autism spectrum children.

Autistic children act and sound like the ones of much younger children. What causes autism specifically is not known yet. Some experts believe that there are bio-chemical reasons for autism; others suspect that it is a psychiatric disorder. Some believe that a combination of the wrong foods and too many antibiotics and environmental toxins can damage the colon and lead to physical and behavioral problems, including autism. The behavioral syndrome of autism includes abnormalities of language and thinking skills; repetitive behavior such as rocking; abnormal responses to sensations, people, events and objects; and self-injurious behavior.

## **CHARACTERISTICS OF AUTISTIC COMMON LANGUAGE**

Let us first examine some characteristics of autistic language as reported by Aug (1974). After a brief overview of the Lovass method of behaviour therapy, then an attempt is made to determine the effectiveness of his therapy. Aug (1974) outlines nine characteristics of language that are common in autistic children. After that Lovass applied reinforcement theory to modify some of these so that speech can be learned. Aug begins by pointing out (1) a failure in most autistic children to communicate a suitable effect in their speech due to an impairment of qualities such as intonation, pitch, emphasis and timbre. He calls this sing-song or monotonous speech. He also found that (2) these children would repeatedly recite stereotyped words and phrases in a ritualistic way, such as the slogan in a television commercial, or a specific question that may be endlessly repeated and asked of everyone. Yet, often was the case where autistic speech (3) failed to address anyone specifically. Even so, these children had special difficulty with personal pronouns even when directing their speech to another person. Especially problematic are the pronouns "I" and "you". And if these pronouns were ever acquired, they were misused. Aug indicates that (4) "yes" is often a difficult word for these children to use. Instead the child who wishes to respond in the affirmative will repeat the question that was just asked. This Aug calls affirmation by (5) repetition. He also found that (6) these children would prompt the speech of the other person in order to strictly adhere to the script of a previous conversation, or the child may directly prescribe the other person to say something by commanding, "Say \_\_\_\_\_".

Autistic children also typically (7) employ extreme literalness in communication as illustrated by the example of one child who said that a picture

is not "on" the wall but "next to" the wall. Idiosyncratic metaphorical speech (8) is another common characteristic in these children. Aug notes an observation by Kanner in 1946 where a seven-year old boy said, "Annette and Cecile make purple." This was an enigma until the original situation was revealed to Kanner: the boy had five bottles of paint which were named after the Dionne quintuplets--Annette was blue and Cecile was red. The metaphors are rigidly bound to the some initial situation which makes the metaphor's frame of reference incoherent. Finally, (9) echolalia is the term used to describe the duplication of speech the child hears. For example, a child may hear the teacher say, "What is this? ...cookie?" to which that child will respond with same intonation and rhythm, "What is this? ...cookie?". Echolalia is characteristic of (but not restricted to) the speech of autistic children.

### **HOW LANGUAGE SHOULD BE ACQUIRED BY AN AUTISTIC CHILD?**

Lovass understood the characteristics of an autistic child to be a fundamental aspect of autistic speech and its abnormalities. Aug (1974) concludes that "autistic children fail to use words flexibly as vehicles of general meaning, and rather experience them as undifferentiated parts of some unique original situation." (p.165) This concept is elemental to understanding many of these characteristics and the learning problems that disrupt language acquisition in autistic children. Perhaps he was aware of the formidable abyss that may very well separate the two. Yet in the relatively brief description of his program below, one can conclude that he has considered the challenge and nature of the abyss very well. In brief, his program is highly dependent upon the specific severity of the psychotic child involved and the characteristics of that child's language development.

Initially, before any sort of speech reinforcement therapy can begin, any and all psychotic behaviors that may interfere with this program of language behavior modification must be extinguished. Echolalia is an important consideration because there is value to any actual verbalization in this program and it was found that previously autistic, echolalic children progressed at much faster rate than previously autistic, mute children (the difference is between one and a half years and eight months of training; in addition, the previously echolalic children's language was higher quality across the board). Yet, uncontrolled echolalia can and did interfere with this program and it had to be carefully managed. Violent self-destructive acts common in more severe psychotic children obviously needed to be suppressed before any attempt of communication or therapy can be made. If the child is left unrestrained extinction of these destructive acts does take place, however, it is slow and therefore very painful. In one case, the child did not stop until he had given himself over 10,000 blows. Electric shock therapy contingent upon self-destructive acts was immediately effective (although somewhat controversial). After self-destructive and self-stimulating acts are suppressed, a program of shaping can begin in which the process of acquiring speech is broken down into many, very simple behaviors. The sequence of behaviors begins and, bit by bit, each behavior is learned.

Primary reinforcers (those that attend a physiological need, such as food attends to hunger) are used initially because of their power and effectiveness. First the child learns to be attentive: eye to face contact is prompted and reinforced. In the use of prompts, given a certain stimulus situation, one wants a particular response to occur in its presence so that it can be reinforced. The prompt cues the correct response prior to training, or with minimal training. Later the prompt is fading so that the control of a response is shifted from one stimulus to another. This method is used often throughout the stages of this program. Next, the frequency of spontaneous vocalizations must be increased. Therefore, any vocalization will be reinforced. Incompatible responses must not be reinforced, however, so attentiveness and vocalization must both occur together to be reinforced. Then, single phonemes are vocalized by the teacher (beginning with some vowels and bilabial stop consonants such as /b/ and then progressing on to more difficult spirants) to which closer and closer approximations are reinforced. Often, a manual prompt may be used to form the lips into the correct shape, then slowly this prompt is faded. The repertoire of sounds is slowly increased. Now words can be formed by juxtaposing phonemes in the child's repertoire. The data that generates the learning curves with these children is accelerated positively. They are acquiring a discrimination in which the response resembles its stimulus. These data are characteristic of successful imitation training. Yet, these children still do not know the meanings of the words they imitate. Next, Lovass begins a program of language training to teach such meaningfulness.

Lovass explains (Wing, 1966:128) that practically all language training following verbal imitation training can be understood as the establishment of three basic discriminations: In the first discrimination, the stimulus is nonverbal and the response is verbal. The stimuli can be objects, symbols, behavior, etc. A good example of this discrimination is the labeling of objects or the description a situation. The second discrimination has a verbal stimulus which could arise from oneself or others; the response is nonverbal. When a child obeys an order, for example, the discrimination indicates comprehension. In the third discrimination, both the stimulus and response are verbal. A conversation or question and answer discussions are examples indicating this discrimination. Language training begins simply, by training a labeling vocabulary. This training will involve the acquisition of both the first and second discriminations outlined above. It is argued that mastery of a particular label occurs when it is generalized to all classes of that object.

For example, when a member of a class objects is presented, such as a chair, and it is correctly labeled as a chair when it is first presented, then the concept of "chair" is understood. Through the use of all three discriminations, training can now extend into the following areas in the order listed: appropriate use of and response to prepositions and pronouns, preposition training, pronoun training (eg. I-mine, you-yours, he-his ie. nominative and possessive cases), discrimination of the personal case, combining discriminations of pronouns and prepositions together (additive, more and more complex discriminations must be made to a stimulus, there is also a savings across tasks). Also, after three months time, there is shift from primary to secondary (learned) reinforcers. After

considerable time, these children were trained to make relatively complex discriminations. Yet, Lovass was concerned that these children were over trained- only rarely did they volunteer to speak. They seemed to be strongly responsively oriented to the attending adult trainers. A program of training spontaneous speech then begins. The program phases were overlapping: the institution of demands, and the development of commentary and story telling including the recall of past events. An example of the latter: a story may be read by the teacher and then the child is asked to retell it, or he may be prompted to recall it with questions that reflect a comprehension of the story.

Lovass also reports (Wing, 1966, p.140) that he obtained extra elaborations not expected in the program design. These he cites as being good evidence that his program was indeed having some effect on language development. He uses the example of Ricky who once made a comment on growth during the later phases of the program. During language training, Ricky learned about the concept of size and many things that were large and small were discussed. In one discussion, Ricky was told that small plants grow to larger size by pouring water on them. Ricky thought about that for a moment and then he said, "put some water on my head". Lovass feels that distinctively human contributions by these children, such as this one, defends his program against objections that it would create "trained seal" or mechanical qualities in the subjects. What insight, then, does this program by Lovass give us into the concept of language and its acquisition? A number of things must be remembered.

The Lovass studied a reverse of the process exhibited by normal children has already been seen. That is, in normal children, comprehension usually precedes production of a form, and comprehension is usually the immediate state after productive training. Also, from later reports of Lovass' treatment (Lovass, 1973), one finds that the initial improvement in the children's language has been quickly setback as soon as their environment failed to maintain the same demands on their behavior as the training environment. Once the maintenance of the social interaction breaks down, so too will much of an autistic child's learned language function. The question remains, then, whether there can be a transferal of language from a treatment situation to a natural one in which the subject must "fend for him or herself". A context must be created in which meaningful and necessary speech and language must be used both in normal children and autistic children. And serving as the ultimate reinforcer must be the effectiveness of the child's communication in the child's own environment.

## CONCLUSION

Normal children almost never have no language barriers to take account for their language acquisition, however it will not happen to how autistic children acquire. Autistic children must be conditioned to achieve speech mastery at certain level within unestimated times and efforts. Sometimes they manage to acquire words but only meaningless words, for their words are not well-organized to produce meaningful words in any sequence of words. Lovass learned to know what caused these abnormalities to the autistic children. According to Lovass, to start with attempts of communication therapy, there are some ways of making them really

talk, that is (1) echolalia must initially be extinguished, (2) self-destructive acts must be suppressed by electric shock therapy, (3) attentiveness is compulsory; eye and face contact must be prompted or reinforced, (4) frequency of spontaneous vocalizations must be increased; this must occur together with attentiveness, (5) the repertoire of sounds must slowly be increased. Further, Lovass claimed that verbal language training practically includes three basic discriminations; (1) stimuli (nonverbal) – response (verbal), (2) stimuli (verbal) – response (nonverbal), (3) stimuli (verbal) – response (verbal).

## REFERENCES

- Aug, Robert C. 1974. "The Language of the Autistic Child". In E. W. Straus (Ed.), *Language and Language Disturbances*. Pittsburgh: Duquesne University Press.
- Clark, H. H., Clark E. H. 1977. *Psychology and Language*. New York: Harcourt Brace Jovanovich, Inc.
- De Villiers, J. G., de Villiers, P. A. 1978. *Language Acquisition*. Cambridge: Harvard University Press.
- Lovass, O. I. 1966. "A Program for the Establishment of Speech in Psychotic Children". In J. K. Wing (Ed.), *Early Childhood Autism*. New York: Pergamon Press.
- McCandles, Jaquelyn. 2005. *Children with Starving Brains*. 2<sup>nd</sup> edition. New York: Bramble Books.
- Rosenhan, D. L., Seligman, M. E. P. 1989. *Abnormal Psychology*. New York: W. W. Norton and Company.
- Straddon, J. E. R., Ettinger, R. H. 1989 *Learning: An Introduction to the Principles of Adaptive Behaviour*. San Diego: Harcourt Brace Janovich, Publishers.
- Wing, J. K. 1966. *Early Childhood Autism*. New York: Pergamon Press.